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**COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS**

# REPORT OF THE COMMITTEE OF EXPERTS ON ITS EIGHTEENTH SESSION
**(28 November - 7 December 1994)**

## Addendum 2

Annex 2: Amendments to Chapter 4 of the Recommendations on the Transport of Dangerous Goods.

GE.95-20479

## CHAPTER 4: SPECIAL RECOMMENDATIONS RELATING TO CLASS 1

**Paragraph**

**4.1.5** In the first sentence change the reference "4.8" to "4.9".
In the third sentence change the reference "4.3" to "4.4".

**4.2.1** In the last sentence but one change the reference to figure "1.2" to "10.2" and before "Tests" insert "Manual of".

In the last sentence change the reference to figure "1.3" to "10.3".

**4.2.2** In the first sentence before "the Recommendations" insert "Part I of" and before "Tests" insert "Manual of".

**4.2.3** Amend to read:

"The competent authority which prescribes the definitive test method corresponding to each of the Test Types should specify the appropriate test criteria. Where there is international agreement on test criteria, the details are given in the publication referred to above describing the seven series of tests."

**4.4.1** In the last sentence before "Tests" insert "Manual of".

**4.4.1)**
**4.4.3)** In the last sentence change the reference to figure "1.3" to "10.3".

**4.5.3** In the last sentence before "Tests" insert "Manual of".

**4.7.2** Renumber the existing paragraph 4.7.2 as 4.7.3.

Add a new paragraph as follows:

"4.7.2 Consignment of goods of Class 1, other than Division 1.4, should be accompanied by a declaration, which may appear on the transport document, certifying that the freight container, vehicle or wagon is structurally serviceable as

defined in 4.7.1."

**4.8** Renumber existing text as new 4.9.

Insert a new sub-section 4.8 to read:

**4.8 Packing Requirements for Explosives**

**4.8.1** ***Introduction***

**4.8.1.1** All packagings for Class 1 goods should be so designed and constructed that:

(a) they will protect the explosives, prevent them escaping and cause no increase in the risk of unintended ignition or initiation when subjected to normal conditions of transport including foreseeable changes in temperature, humidity and pressure;

(b) the complete package can be handled safely in normal conditions of transport; and

(c) the packages will withstand any loading imposed on them by foreseeable stacking to which they will be subject during transport so that they do not add to the risk presented by the explosives, the containment function of the packagings is not harmed, and they are not distorted in a way or to an extent which will reduce their strength or cause instability of a stack.

**4.8.1.2** Packing recommendations for Class 1 consist of general packing provisions which apply to all or a broad spectrum of goods in Class 1 and special provisions which apply to specific UN (substance/article identification) numbers. The general packing provisions are detailed in 4.8.2 and certain Special Provisions in column (b3) of Chapter 2, Table 4.3 and Chapter 3.

**4.8.2** ***General Packing Provisions***

**4.8.2.1** The general provisions detailed below are in addition to those in 9.3.

**4.8.2.2** All explosive substances and articles, as prepared for transport, should have been classified in accordance with the procedures detailed in 4.2 to 4.5 inclusive.

**4.8.2.3** Class 1 goods should be packed in accordance with:

(a) the appropriate packing method shown in column (c2) of Chapter 2 as detailed in Table 4.3.

(b) Any relevant Special Provisions shown in column (b3) of Chapter 2 for a specific UN number, as detailed in Table 4.3 and Chapter 3.

*Note: In Table 4.3, the following convention is used:*

*Packing methods EP 01 to EP 09 - reserved for methods requiring competent authority approval;*

*Packing methods EP 10 to EP 29 - reserved for explosive substances; and*

*Packing methods EP 30 onwards - reserved for explosive articles.*

**4.8.2.4** Packages should conform to the requirements of Chapter 9 and should meet the test requirements of 9.7, subject to 9.3.13 and 9.4.4.

**4.8.2.5** The closure device of packagings containing liquid explosives should ensure a double protection against leakage.

**4.8.2.6** The closure device of metal drums should include a suitable gasket; if a closure device includes a screw-thread, the ingress of explosive substances into the screw-thread should be prevented.

**4.8.2.7** Packagings for water soluble substances should be water resistant. Packagings for desensitized or phlegmatized substances should be closed to prevent changes in concentration during transport.

**4.8.2.8** When the packaging includes a double envelope filled with water which may freeze during transport, a sufficient quantity of an anti-freeze agent should be added to the water

to prevent freezing. Anti-freeze that could create a fire hazard because of its inherent flammability should not be used.

**4.8.2.9** Nails, staples and other closure devices made of metal without protective covering should not penetrate to the inside of the outer packaging unless the inner packaging adequately protects the explosives against contact with the metal.

**4.8.2.10** Inner packagings, fittings and cushioning materials and the placing of explosive substances or articles in packages should be accomplished in a manner which prevents the explosive substance from becoming loose in the outer packaging under normal conditions of transport. Metallic components of articles should be prevented from making contact with metal packagings. Articles containing explosive substances not enclosed in an outer casing should be separated from each other in order to prevent friction and impact. Padding, trays, partitioning in the inner or outer packaging, mouldings or receptacles may be used for this purpose.

**4.8.2.11** Packagings should be made of materials compatible with, and impermeable to, the explosives contained in the package, so that neither interaction between the explosives and the packaging materials, nor leakage, causes the explosive to become unsafe to transport, or the hazard division or compatibility group to change.

**4.8.2.12** The ingress of explosive substances into the recesses of seamed metal packagings should be prevented.

**4.8.2.13** Plastics packagings should not be liable to generate or accumulate sufficient static electricity so that a discharge could cause the packaged explosive substances or articles to initiate, ignite or function.

**4.8.2.14** Large and robust explosives articles, normally intended for military use, without their means of initiation or with their means of initiation containing at least two effective protective features, may be carried unpackaged. When such articles have propelling charges or are self-propelled, their ignition systems should be protected against stimuli encountered during normal conditions of transport. A negative result in Test Series 4 on an unpackaged article indicates that the article can be considered for transport unpackaged. Such unpackaged articles may be fixed to cradles or contained in crates or other suitable handling devices.

**4.8.2.15** Explosive substances should not be packed in inner or outer packagings where the differences in internal and external pressures, due to thermal or other effects, could cause an explosion or rupture of the package.

**4.8.2.16** Whenever loose explosive substances or the explosive substance of an uncased or partly cased article may come into contact with the inner surface of metal packagings (1A2, 1B2, 4A, 4B and metal receptacles), the metal packaging should be provided with an inner liner or coating (see 9.3.2).

**4.8.2.17** Notwithstanding the explosive packing methods listed in Table 4.3 and Chapter 2, EP 01 may be adopted for any explosive substance or article provided the package has been approved by a national competent authority.

**Table 4.3** Renumber as Table 4.4

In the entry for "Detonator assemblies, non-electric for blasting" add ", 0500".

In the entry for "Explosive, deflagrating" delete "0158" and "0203".

In the entry for "Explosive, secondary" delete "0158" and "0203".

Insert a new Table 4.3 as follows:

**Table 4.3: PACKING METHODS FOR EXPLOSIVES**

***Introductory notes***

***Note 1:*** *Whenever Boxes, natural wood, ordinary (4C1) are listed in this Table, a Box, natural wood, sift-proof walls (4C2) may be used instead.*

***Note 2:*** *Leakproof packagings should correspond to a design type that has passed leakproofness test at the Packing Group II level.*

***Note 3:*** *The term receptacle used in the Inner and Intermediate packaging columns of this table includes boxes, bottles, cans, drums, jars and tubes, including any means of closure.*

***Note 4:*** *Reels are devices made of plastics, wood, fibreboard, metal or other suitable material comprising a central spindle with, or without, side walls at each end of the spindle. Articles and substances can be wound onto the spindle and may be retained by side walls.*

***Note 5:*** *Trays are sheets of metal, plastics, wood, fibreboard or other suitable material which are placed in the inner, intermediate or outer packaging and achieve a close-fit in such packaging. The surface of the tray may be shaped so that packagings or articles can be inserted, held secure and separated from each other.*

***Note 6:*** *In this table, "special provisions" contain the numbers of the special provisions in Chapter 3 and the sub-paragraphs of 4.8 which apply.*

***Note 7:*** *Some UN numbers cover substances which may be transported dry or wetted. Where appropriate, the heading of the packing method indicates whether it is suitable for the dry, powder or wetted substance.*

| METHOD EP 01 | | |
|---|---|---|
| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |

As approved by the competent authority. The State's distinguishing sign for motor vehicles in international traffic of the country for which the authority acts, should be marked on the shipping documents as follows:

"Packaging approved by the competent authority of ..."

Division, Compatibility group and UN number:

1.1A: 0473
1.1B: 0461
1.1C: 0462, 0474
1.1D: 0124, 0463, 0475
1.1E: 0464
1.1F: 0465
1.1G: 0476
1.1J: 0397, 0399, 0449
1.1L: 0354, 0357
1.2B: 0382
1.2C: 0466
1.2D: 0467
1.2E: 0468
1.2F: 0469
1.2J: 0395, 0398, 0400
1.2K: 0020
1.2L: 0322, 0355, 0358, 0380
1.3C: 0470, 0477
1.3G: 0478
1.3J: 0247, 0396, 0450
1.3K: 0021
1.3L: 0250, 0356, 0359
1.4B: 0350, 0383
1.4C: 0351, 0479
1.4D: 0352, 0480, 0494
1.4E: 0471
1.4F: 0472
1.4G: 0353, 0485
1.4S: 0349, 0384, 0481
1.5D: 0482
1.6N: 0486
Other: 0190

Special provisions:

16 for 0190

178 for 0349, 0350, 0351, 0352, 0353, 0354, 0355, 0356, 0357, 0358, 0359, 0382, 0383, 0384, 0461, 0462, 0463, 0464, 0465, 0466, 0467, 0468, 0469, 0470, 0471, 0472, 0473, 0474, 0475, 0476, 0477, 0478, 0479, 0480, 0481, 0482 and 0485

| METHOD EP 10(a) | | |
|---|---|---|
| **Inner packagings and arrangements** | **Intermediate packagings and arrangements** | **Outer packagings and arrangements** |
| **Bags**<br>plastics<br>textile, plastic coated or lined<br>rubber<br>textile, rubberized<br>textile | **Bags**<br>plastics<br>textile, plastic coated or lined<br>rubber<br>textile, rubberized<br>**Receptacles**<br>plastics<br>metal | **Drums**<br>steel, removable head (1A2)<br>plastics, removable head (1H2) |

Division, Compatibility group and UN number:

1.1A: 0074, 0113, 0114, 0129, 0130, 0135, 0224

Special provisions:

266 for 0074, 0113, 0114, 0129, 0130, 0135

Notes:

1: The Intermediate packagings should be filled with water saturated material such as an anti-freeze solution or wetted cushioning.

2: Outer packagings should be filled with water saturated material such as an anti-freeze solution or wetted cushioning. Outer packagings should be constructed and sealed to prevent evaporation of the wetting solution, except when 0224 is being carried dry.

| METHOD EP 10(b) | | |
|---|---|---|
| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
| Receptacles<br>metal<br>wood<br>rubber, conductive<br>plastics, conductive<br>Bags<br>rubber, conductive<br>plastics, conductive | Dividing partitions<br>metal<br>wood<br>plastics<br>fibreboard | Boxes<br>natural wood, sift-proof wall (4C2)<br>plywood (4D)<br>reconstituted wood (4F) |

Division, Compatibility group and UN number:
1.1A: 0074, 0113, 0114, 0129, 0130, 0135, 0224

Special provisions:
265 for 0074, 0113, 0114, 0129, 0130, 0135, 0224
266 for 0074, 0113, 0114, 0129, 0130, 0135

## METHOD EP 11

| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
|---|---|---|
| Bags<br>paper, waterproofed<br>plastics<br>textile, rubberized<br>Sheets<br>plastics<br>textile, rubberized | Not necessary | Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>plywood (1D)<br>fibreboard (1G)<br>plastics, removable head (1H2)<br>Boxes<br>steel (4A)<br>aluminium (4B)<br>natural wood, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, expanded (4H1)<br>plastics, solid (4H2) |

Division, Compatibility group and UN number:

1.1C: 0433

1.3C: 0159, 0343

Special provisions:

see 4.8.2.7

105 for 0343

266 for 0159, 0433

Note:

Inner packagings are not required for 0159 when metal (1A2 or 1B2) or plastics (1H2) drums are used as outer packagings.

**METHOD EP 12(a) (solid wetted 1.1D)**

| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
|---|---|---|
| Bags<br>paper, multiwall, water resistant<br>plastics<br>textile<br>textile, rubberized<br>woven plastics<br>Receptacles<br>metal<br>plastics | Bags<br>plastics<br>textile, plastic coated or lined<br>Receptacles<br>metal<br>plastics | Boxes<br>steel (4A)<br>aluminium (4B)<br>natural wood, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, expanded (4H1)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>fibre (1G)<br>plastics, removable head (1H2) |

Division, Compatibility group and UN number:

1.1D: 0004, 0072, 0076, 0078, 0118, 0133, 0146, 0150, 0151, 0154, 0209, 0214, 0215, 0219, 0220, 0226, 0266, 0282, 0340, 0391, 0394, 0401

Special provisions:

15 for 0154, 0209, 0214, 0215, 0401
18 for 0220
253 for 0004, 0076, 0078, 0154, 0219, 0394
266 for 0072, 0133, 0150, 0226, 0391

Note:

1: Intermediate packagings are not required if leakproof drums are used as the outer packaging.
2: Intermediate packagings are not required for 0072 and 0226.

## METHOD EP 12(b) (solid dry, other than powder 1.1D)

| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
|---|---|---|
| Bags<br>paper, Kraft<br>paper, multiwall, water resistant<br>plastics<br>textile<br>textile, rubberized<br>woven plastics | Bags (for 0150 only)<br>plastics<br>textile, plastic coated or lined | Bags<br>woven plastics, sift-proof (5H2/3)<br>plastics, film (5H4)<br>textile, sift-proof (5L2)<br>textile, water resistant (5L3)<br>paper, multiwall, water resistant (5M2)<br>Boxes<br>steel (4A)<br>aluminium (4B)<br>natural wood, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, expanded (4H1)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>fibre (1G)<br>plastics, removable head (1H2) |

Division, Compatibility group and UN number:

1.1D: 0004, 0076, 0078, 0079, 0118, 0146, 0147, 0150, 0151, 0153, 0154, 0155, 0207, 0208, 0209, 0213, 0214, 0215, 0216, 0217, 0218, 0219, 0220, 0222, 0223, 0266, 0282, 0340, 0341, 0385, 0386, 0387, 0388, 0389, 0390, 0391, 0392, 0393, 0401, 0402, 0411, 0483, 0484, 0489, 0490, 0496

Special provisions:

15 for 0154, 0155, 0209, 0214, 0215, 0401
18 for 0220
131 for 0411
152 for 0402
253 for 0004, 0076, 0078, 0154, 0216, 0219, 0386
262 for 0209
266 for 0150, 0391

Note:

Inner packagings are not required for 0222 and 0223 when the outer packaging is a bag.

**METHOD EP 12(c) (for solid dry powder 1.1D)**

| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
|---|---|---|
| Bags<br>paper, multiwall, water resistant<br>plastics<br>woven plastics<br>Receptacles<br>fibreboard<br>metal<br>plastics<br>wood | Bags<br>paper, multiwall, water resistant with inner lining<br>plastics<br>Receptacles<br>metal<br>plastics | Boxes<br>steel (4A)<br>natural wood, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>fibre (1G) |

Division, Compatibility group and UN number:

1.1D: 0004, 0076, 0078, 0079, 0118, 0146, 0151, 0153, 0154, 0155, 0207, 0208, 0209, 0213, 0214, 0215, 0216, 0217, 0218, 0219, 0220, 0222, 0223, 0266, 0282, 0385, 0386, 0387, 0388, 0389, 0390, 0392, 0401, 0402, 0411, 0483, 0484, 0489, 0490, 0496

Special provisions:

15 for 0154, 0155, 0209, 0214, 0215, 0401
18 for 0220
131 for 0411
152 for 0402
253 for 0004, 0076, 0078, 0154, 0216, 0219, 0386
262 for 0209

Note:

1: Intermediate packagings are not required if drums are used as the outer packaging.
2: These packages should be sift-proof.

## METHOD EP 13

| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
|---|---|---|
| Bags<br>paper<br>plastics<br>textile, rubberized<br>Receptacles<br>fibreboard<br>metal<br>plastics<br>wood<br>Sheets<br>paper, kraft<br>paper, waxed | Not necessary | Boxes<br>steel (4A)<br>natural wood, ordinary (4C1)<br>natural wood, sift-proof walls (4C2)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>fibre (1G) |

Division, Compatibility group and UN number:

1.1D: 0027, 0028
1.1G: 0094
1.3G: 0305

Special provisions:

4.8.2.16 for 0027 when inner packagings are not used
263: for 0094, 0305

Note:

1: Inner packagings are not necessary for 0027 when drums are used as the outer packaging.
2: Packages should be sift-proof.
3: Sheets may only be used for 0028.

| METHOD EP 14(a) (solid wetted) | | |
|---|---|---|
| **Inner packagings and arrangements** | **Intermediate packagings and arrangements** | **Outer packagings and arrangements** |
| Bags<br>plastics<br>textile<br>woven plastics<br>Receptacles<br>metal<br>plastics | Bags<br>plastics<br>textile, plastic coated or lined<br>Receptacles<br>metal<br>plastics | Boxes<br>steel (4A)<br>natural wood, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>plywood (1D)<br>fibre (1G)<br>plastics, removable head (1H2) |

Division, Compatibility group and UN number:
1.3C: 0077, 0234, 0235, 0236, 0342

Special provisions:
15: for 0234
105: for 0342
253: for 0077, 0234, 0235, 0236

Note:
1: Inner packagings are not required for 0342 when metal (1A2 or 1B2) or plastics (1H2) drums are used as outer packagings.
2: Intermediate packagings are not required if leakproof removable head drums are used as the outer packaging.

| METHOD EP 14(b) (solid dry) | | |
|---|---|---|
| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
| Bags<br>paper, kraft<br>plastics<br>textile, sift-proof<br>woven plastics, sift-proof<br>Receptacles<br>fibreboard<br>metal<br>paper<br>plastics<br>woven plastics, sift-proof | Not necessary | Boxes<br>natural wood, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>plywood (1D)<br>fibre (1G)<br>plastics, removable head (1H2) |

Division, Compatibility group and UN number:
1.1C: 0160, 0498
1.3C: 0077, 0132, 0161, 0234, 0235, 0236, 0406, 0499
1.4C: 0407, 0448

Special provisions:
4.8.2.16: for 0160 and 0161, when metal drums (1A2 or 1B2) are used as the outer packaging.
109 for 0132
253: for 0077, 0132, 0234, 0235, 0236
256: for 0160 and 0161, when metal drums (1A2 or 1B2) are used as the outer packaging.

Note:
Inner packagings are not required for 0160 and 0161 if drums are used as the outer packaging.

## METHOD EP 15

| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
|---|---|---|
| Receptacles<br>metal<br>plastics | Bags<br>plastics in metal receptacles<br>Drums<br>metal | Boxes<br>natural wood, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>plywood (1D)<br>fibre (1G) |

Division, Compatibility group and UN number:

1.1C: 0497
1.1D: 0075, 0143, 0144
1.3C: 0495

Special provisions:

224 for 0495 and 0497
254 for 0075, 0143, 0495 and 0497 when boxes are used as the outer packaging.
255 for 0075, 0143, 0495 and 0497 when drums are used as the outer packaging.
264 for 0144
266 for 0075 and 0143

Note:

1: metal receptacles as inner packagings may only be used for 0144.
2: bags are to be used as intermediate packagings for 0075, 0143, 0495 and 0497 when boxes are used as outer packagings.
3: drums are to be used as intermediate packagings for 0075, 0143, 0495 and 0497 when drums are used as outer packagings.
4: intermediate packagings are not necessary for 0144.
5: fibreboard boxes (4G) may only be used for 0144.
6: aluminium drums, removable head (1B2) are not allowed for 0144.

## METHOD EP 16

| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
|---|---|---|
| Bags<br>paper, water and oil resistant<br>plastics<br>texitile, plasic coated or lined<br>woven plasics, sift-proof<br>Receptacles<br>fibreboard, water resistant<br>metal<br>plastics<br>wood, sift-proof<br>Sheets<br>paper, water resistant<br>paper, waxed<br>plastics | Not necessary | Bags<br>woven plastics (5H1/2/3)<br>paper, mulitwall, water resistant (5M2)<br>plastics, film (5H4)<br>textile, sift-proof (5L2)<br>textile, water resistant (5L3)<br>Boxes<br>steel (4A)<br>aluminium (4B)<br>wood natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>fibre (1G)<br>plastics, removable head (1H2)<br>Jerricans<br>steel, removable head (3A2)<br>plastics, removable head (3H2) |

Division, Compatibility group and UN number:
1.1D: 0081, 0082, 0083, 0084, 0241
1.5D: 0331, 0332

Special provisions:
267: for 0083
268: for 0331 and 0332

Note:
1: Inner packagings are not necessary for 0082, 0241, 0331 and 0332 if leakproof removable head drums are used as the outer packaging.
2: Inner packagings are not required for 0082, 0084, 0241, 0331 and 0332 when the explosive is contained in a material impervious to liquid.
3: Inner packagings are not required for 0081 when contained in rigid plastic which is impervious to nitric esters.
4: Inner packagings are not required for 0331when Bags (5H2), (5H3) or (5H4) are used as outer packagings.
5: Bags (5H2) and (5H3) should be used only for 0082, 0241, 0331 and 0332.
6: Bags should not be used as outer packagings for 0081.

| METHOD EP 17 | | |
|---|---|---|
| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
| Not necesary | Not necessary | IBCs<br>metal (11A), (11B), (11N), (21A), (21B), (21N), (31A), (31B), (31N)<br>flexible (13H2), (13H3), (13H4), (13L2), (13L3), (13L4), (13M2)<br>rigid plastics (11H1), (11H2), (21H1), (21H2), (31H1), (31H2)<br>composite (11HZ1), (11HZ2), (21HZ1), (21HZ2), (31HZ1), (31HZ2) |

Division, Compatibility group and UN number:

1.1D: 0082, 0241
1.5D: 0331, 0332

Special provisions:

260 for 0082
261 for 0241
268 for 0331, 0332

Notes:

1: IBCs should only be used for free flowing substances.
2: metal IBCs should not be used for 0082 and 0241.
3: flexible IBCs should be used for solids only.

## METHOD EP 30

| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
|---|---|---|
| Not necessary | Not necessary | Boxes<br>steel (4A)<br>aluminium (4B)<br>wood natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, expanded (4H1)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>fibre (1G)<br>plastics, removable head (1H2) |

Division, Compatibility group and UN number:

1.1C: 0279, 0280, 0326
1.1D: 0034, 0038, 0048, 0056, 0137, 0168, 0221, 0286, 0451, 0457
1.1E: 0006, 0181, 0329
1.1F: 0005, 0033, 0037, 0136, 0167, 0180, 0330, 0369
1.2C: 0281, 0328, 0413, 0414, 0436
1.2D: 0035, 0138, 0169, 0287, 0346, 0458
1.2E: 0182, 0321
1.2F: 0007, 0291, 0294, 0295, 0324, 0426
1.2G: 0009, 0015, 0018, 0039, 0171, 0238, 0434
1.2H: 0243, 0245
1.3C: 0183, 0186, 0242, 0327, 0417, 0437
1.3G: 0010, 0016, 0019, 0240, 0254, 0299, 0424, 0488
1.3H: 0244, 0246
1.4C: 0338, 0339, 0438
1.4D: 0344, 0347, 0370, 0459
1.4E: 0412
1.4F: 0348, 0371, 0427
1.4G: 0297, 0300, 0301, 0303, 0362, 0363, 0425, 0435, 0453
1.4S: 0012, 0014, 0345, 0460

Special provisions:

4.8.2.14: applies to all numbers, except for 0005, 0007, 0012, 0014, 0033, 0037, 0136, 0167, 0180, 0238, 0240, 0242, 0279, 0291, 0294, 0295, 0324, 0326, 0327, 0330, 0338, 0339, 0348, 0369, 0371, 0413, 0414, 0417, 0426, 0427, 0453, 0457, 0458, 0459, 0460
4.8.2.16: for 0457, 0458, 0459, 0460
204: for 0015, 0016 and 0303

## METHOD EP 31

| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
|---|---|---|
| Bags<br>paper<br>plastics<br>Receptacles<br>fibreboard<br>metal<br>plastics<br>wood<br>Reels | Not necessary | Boxes<br>steel (4A)<br>aluminium (4B)<br>wood, natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>fibre (1G)<br>plastics, removable head (1H2) |

Division, Compatibility group and UN number:

1.1B: 0029, 0030, 0360
1.4B: 0255, 0267, 0361
1.4S: 0455, 0456, 0500

Notes:

1: Bags should not be used as inner packagings for 0029, 0267 and 0455.
2: Reels should only be used as inner packagings for 0030, 0255, 0360, 0361, 0456 and 0500.

| METHOD EP 32(a) | | |
|---|---|---|
| Articles consisting of closed metal, plastics or fibreboard casings that contain a detonating explosive, or consisting of plastics-bonded detonating explosives | | |
| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
| Not necessary | Not necessary | Boxes<br>steel (4A)<br>aluminium (4B)<br>wood, natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2) |
| Division, Compatibility group and UN number:<br>1.1D: 0042, 0060<br>1.2D: 0283<br><br>Special provisions: | | |

| METHOD EP 32(b) | | |
|---|---|---|
| Articles without closed casings | | |
| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
| Receptacles<br>fibreboard<br>metal<br>plastics<br>Sheets<br>paper<br>plastics | Not necessary | Boxes<br>steel (4A)<br>aluminium (4B)<br>wood, natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2) |
| Division, Compatibility group and UN number:<br>1.1D: 0042, 0060<br>1.2D: 0283<br><br>Special provisions:<br>4.8.2.16: for 0042, 0060 and 0283 | | |

## METHOD EP 33

| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
|---|---|---|
| Receptacles<br>fibreboard<br>metal<br>plastics<br>wood<br>Trays, fitted with dividing<br>partitions<br>fibreboard<br>plastics<br>wood | Receptacles<br>fibreboard<br>metal<br>plastics<br>wood | Boxes<br>steel (4A)<br>aluminium (4B)<br>wood, natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2) |

Division, Compatibility group and UN number:

1.1B: 0073, 0225, 0377
1.1D: 0043
1.2B: 0268, 0364
1.3G: 0212, 0319
1.4B: 0365, 0378
1.4G: 0306, 0320
1.4S: 0044, 0366, 0376

Notes:

1: Trays should only be used as inner packagings for 0044, 0073, 0319, 0320, 0364, 0365, 0366, 0376, 0377 and 0378.

2: Receptacles are only required as intermediate packagings when the inner packagings are trays

| METHOD EP 34 | | |
|---|---|---|
| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
| Bags<br>water resistant<br>Receptacles<br>fibreboard<br>metal<br>plastics<br>wood<br>Sheets<br>fibreboard, corrugated<br>Tubes<br>fibreboard | Not necessary | Boxes<br>steel (4A)<br>aluminium (4B)<br>wood, natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2) |
| Division, Compatibility group and UN number:<br>1.1D: 0099, 0374<br>1.1F: 0296<br>1.2C: 0381<br>1.2D: 0375<br>1.2F: 0204<br>1.3C: 0275, 0277<br>1.4C: 0276, 0278<br>1.4S: 0070, 0173, 0174, 0323 | | |

| METHOD EP 35 | | |
|---|---|---|
| **Inner packagings and arrangements** | **Intermediate packagings and arrangements** | **Outer packagings and arrangements** |
| **Bags**<br>**paper**<br>**plastics**<br>**Receptacles**<br>**fibreboard**<br>**metal**<br>**plastics**<br>**wood**<br>**Sheets**<br>**paper**<br>**plastics** | **Not necessary** | **Boxes**<br>**steel (4A)**<br>**aluminium (4B)**<br>**wood, natural, ordinary (4C1)**<br>**plywood (4D)**<br>**reconstituted wood (4F)**<br>**fibreboard (4G)**<br>**plastics, expanded (4H1)**<br>**plastics, solid (4H2)**<br>**Drums**<br>**steel, removable head (1A2)**<br>**aluminium, removable head (1B2)**<br>**fibre (1G)**<br>**plastics, removable head (1H2)** |
| **Division, Compatibility group and UN number:**<br>**1.1G: 0049, 0192, 0194, 0196, 0333, 0418, 0420, 0428**<br>**1.2G: 0313, 0334, 0419, 0421, 0429**<br>**1.3G: 0050, 0054, 0092, 0093, 0195, 0335, 0430, 0487, 0492**<br>**1.4G: 0191, 0197, 0312, 0336, 0403, 0431, 0493**<br>**1.4S: 0193, 0337, 0373, 0404, 0405, 0432** | | |

| METHOD EP 36 | | |
|---|---|---|
| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
| Bags<br>plastics<br>textile<br>Boxes<br>fibreboard<br>plastics<br>wood<br>Dividing partitions in the outer packagings | Not necessary | Boxes<br>steel (4A)<br>aluminium (4B)<br>wood, natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>fibre (1G)<br>plastics, removable head (1H2) |
| Division, Compatibility group and UN number:<br>1.3C: 0447<br>1.4C: 0379, 0446<br>1.4S: 0055 | | |

| METHOD EP 37 | | |
|---|---|---|
| **Inner packagings and arrangements** | **Intermediate packagings and arrangements** | **Outer packagings and arrangements** |
| Bags<br>plastics<br>Boxes<br>fibreboard<br>Tubes<br>fibreboard<br>metal<br>plastics<br>Dividing partitions in the outer packagings | Not necessary | Boxes<br>steel (4A)<br>aluminium (4B)<br>wood, natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G) |
| Division, Compatibility group and UN number:<br>1.1D: 0059, 0442<br>1.2D: 0439, 0443<br>1.4D: 0440, 0444<br>1.4S: 0441, 0445<br><br>Special provisions:<br>257: for 0059, 0439, 0440 and 0441 | | |

| METHOD EP 38 | | |
|---|---|---|
| **Inner packagings and arrangements** | **Intermediate packagings and arrangements** | **Outer packagings and arrangements** |
| **Bags**<br>**plastics** | **Not necessary** | **Boxes**<br>**steel (4A)**<br>**aluminium (4B)**<br>**wood, natural, ordinary (4C1)**<br>**plywood (4D)**<br>**reconstituted wood (4F)**<br>**fibreboard (4G)**<br>**plastics, solid (4H2)**<br>**Drums**<br>**steel, removable head (1A2)**<br>**aluminium, removable head (1B2)** |

Division, Compatibility group and UN number:

1.1D: 0288
1.4D: 0237

Special provisions:

4.8.2.16: for 0237 and 0288

Note:

If the ends of the articles are sealed, inner packagings are not necessary

| METHOD EP 39 | | |
|---|---|---|
| **Inner packagings and arrangements** | **Intermediate packagings and arrangements** | **Outer packagings and arrangements** |
| Bags<br>plastics<br>Receptacles<br>fibreboard<br>metal<br>plastics<br>wood<br>Reels<br>Sheets<br>paper<br>plastics | Not necessary | Boxes<br>steel (4A)<br>aluminium (4B)<br>wood, natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>plywood (1D)<br>fibre (1G)<br>plastics, removable head (1H2) |

Division, Compatibility group and UN number:

1.1D: 0065, 0290
1.2D: 0102
1.4D: 0104, 0289

Special provisions:

258: for 0065, 0102, 0104, 0289 and 0290

Note:

Inner packagings are not required for 0065 and 0289 when they are in coils.

| METHOD EP 40 | | |
|---|---|---|
| **Inner packagings and arrangements** | **Intermediate packagings and arrangements** | **Outer packagings and arrangements** |
| Bags<br>plastics<br>Reels<br>Sheets<br>paper, kraft<br>plastics | Not necessary | Boxes<br>steel (4A)<br>aluminium (4B)<br>wood, natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>fibre (1G) |

Division, Compatibility group and UN number:

1.3G: 0101
1.4G: 0066, 0103
1.4S: 0105

Special provisions:

4.8.2.16: for 0105

Notes:

1: If the ends of 0105 are sealed, no inner packagings are required.

2: For 0101, the packaging should be sift-proof except when the fuse is covered by a paper tube and both ends of the tube are covered with removable caps.

3: steel and aluminium (boxes and drums) may not be used for 0101.

| METHOD EP 41 | | |
|---|---|---|
| **Inner packagings and arrangements** | **Intermediate packagings and arrangements** | **Outer packagings and arrangements** |
| Receptacles<br>fibreboard<br>metal<br>plastics<br>wood<br>Trays, fitted with dividing<br>partitions<br>plastics<br>wood<br>Dividing partitions in the outer<br>packagings | Not necessary | Boxes<br>steel (4A)<br>aluminium (4B)<br>wood, natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>fibre (1G)<br>plastics, removable head (1H2) |

Division, Compatibility group and UN number:

1.1B: 0106
1.1D: 0284, 0408
1.1F: 0292
1.2B: 0107
1.2D: 0285, 0409
1.2F: 0293
1.2G: 0372
1.3G: 0316, 0318
1.4B: 0257
1.4D: 0410
1.4G: 0317, 0452
1.4S: 0110, 0367, 0368

| METHOD EP 42 | | |
|---|---|---|
| **Inner packagings and arrangements** | **Intermediate packagings and arrangements** | **Outer packagings and arrangements** |
| **Bags**<br>paper<br>plastics<br>**Receptacles**<br>fibreboard<br>metal<br>plastics<br>wood<br>**Sheets**<br>paper<br>**Trays, fitted with dividing**<br>partitions<br>plastics | Not necessary | **Boxes**<br>steel (4A)<br>aluminium (4B)<br>wood, natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2)<br>**Drums**<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>fibre (1G)<br>plastics, removable head (1H2) |
| Division, Compatibility group and UN number:<br>1.1G 0121<br>1.2G: 0314<br>1.3G: 0315<br>1.4G: 0325<br>1.4S: 0131, 0454 | | |

## METHOD EP 43

| Inner packagings and arrangements | Intermediate packagings and arrangements | Outer packagings and arrangements |
|---|---|---|
| Bags<br>paper, kraft<br>plastics<br>textile<br>textile, rubberized<br>Receptacles<br>fibreboard<br>metal<br>plastics<br>Trays, fitted with dividing<br>partitions<br>plastics<br>wood | Not necessary | Boxes<br>steel (4A)<br>aluminium (4B)<br>wood, natural, ordinary (4C1)<br>plywood (4D)<br>reconstituted wood (4F)<br>fibreboard (4G)<br>plastics, solid (4H2)<br>Drums<br>steel, removable head (1A2)<br>aluminium, removable head (1B2)<br>plywood (1D)<br>fibre (1G)<br>plastics, removable head (1H2) |

Division, Compatibility group and UN number:

1.1C: 0271
1.2C: 0415
1.3C: 0272
1.4C: 0491

Special provisions:

256: for 0271, 0272, 0415 and 0491 when metal packagings are used

Note:

Instead of the above inner and outer packagings, composite packagings (6HH2) (plastic receptacle with outer solid box) may be used.

| METHOD EP 44 | | |
|---|---|---|
| **Inner packagings and arrangements** | **Intermediate packagings and arrangements** | **Outer packagings and arrangements** |
| **Receptacles**<br>**fibreboard**<br>**metal**<br>**plastics**<br>**Dividing partitions in the outer packagings** | **Not necessary** | **Boxes**<br>**steel (4A)**<br>**aluminium (4B)**<br>**wood, natural, ordinary (4C1) with metal liner**<br>**plywood (4D) with metal liner**<br>**reconstituted wood (4F) with metal liner**<br>**plastics, expanded (4H1)** |
| Division, Compatibility group and UN number:<br>1.2L: 0248<br>1.3L: 0249<br><br>Special provisions:<br>259 for 0248 and 0249 | | |